AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 8, at line 29, and continuing over on page 9, with the following replacement paragraph:

-- Regardless of whether the metal compound is a metal halide, a metal hydroxide, a metal oxide, or a metal complex, examples of the metal M include Ti, Sr, Zr, Al, B, C, P, Mg, Sc, Cr, Co, Zn, Hf, Fe, Sb, W, V, Sn, Bi, Mn, Mo, Cs, Ge, As, and Ce. Of these, P, Si, W, Mo, Cs, Ge, As, and Ce are metals which are preferred when the metal compound is a metal complex of the heteropoly acid or ixopoly acid type. In particular, a high photocatalytic activity is obtained when the metal M is at least one metal selected from Ti, Si, V, Sn, Sb, ~~Si,~~ W, Nb, Bi, P, Mo, Cs, Ge, As, and Ce, and thus such metals are preferred. --

Please replace the paragraph on page 32, at line 13, with the following replacement paragraph:

-- Titanium oxide-based photocatalysts according to the present invention were prepared in the same manner as described in Example 1 except that the reactive gas containing 1.4 vol % of $TiCl_4$ in hydrogen gas was replaced by a reactive gas containing about 1 vol % of $VOCl_3$, $SnCl_4$, $SbCl_5$, $SiCl_4$, WCl_6, $BiCl_6$, $FeCl_3$, $ZnCl_4$, or $TiCl_4$ in argon gas. The results of an acetaldehyde decomposition test which was performed on these photocatalysts by the above-described method with visible light irradiation are shown in Table 2. --

Please replace the paragraph on page 33, at line 27, and continuing over on page 34, with the following replacement paragraph:

-- A titanium oxide-based photocatalyst having a visible light photocatalytic activity could be obtained by performing the treatment with a reactive gas at a temperature of 323 K or higher. The temperature for the treatment at which a high photocatalytic activity was obtained was in the range of 373 - 773 K, and in particular, better results are achieved in the range of 473 - ~~873~~773 K. A photocatalyst having a high activity could be obtained by a longer duration of treatment when the temperature was lower or by a shorter duration of a treatment when the temperature was higher. --

Please replace the paragraph on page 45, at line 29, and continuing over on page 46, with the following replacement paragraph:

-- The formation of a photocatalytic coating film having a thickness of about 1 μm and the measurement of visible light photocatalytic activity were carried out in the same manner as described in Example ~~1~~12 using 1 part of the titanium oxide-based photocatalyst powder prepared in Example 8 which contained a metal complex and 1 part of colloidal silica (the same as used in Example 1) as a binder component. --